

ARCHITECTURE

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PROFESSIONAL COMMENT.

IN the light of the experience gained in two earthquakes in San Francisco, both in 1868 and in the more recent and disastrous one, Professor Jacques Redway discusses safe building in earthquake zones in a recent issue of the *Geographical Journal*. Based upon the geology of the city Professor Redway assumes that the last of the earthquakes has not been seen and that more are sure to follow. He considers that it is generally understood that the safest building in an earthquake is one of skeleton construction, but as the cost of buildings of this character is too great to be used for dwelling purposes and even for the smaller offices and stores, he deals chiefly with the precautions to be taken to insure the safety of the more ordinary types. He sets down as a rule of first importance that to escape collapse a building must vibrate as a whole. If it vibrates in segments it will sustain serious damage in any vigorous shock, and therefore it is imperative that new buildings should contain the following characteristics:

Foundations so strong and well bonded that they will act as a unit.

Well built interior transverse as well as longitudinal walls.

Mortar containing about twenty per cent. of cement.

Lateral walls tied by means of joists or by iron rods.

Trussed roofs with the rods for the lower chords.

Professor Redway believes that those Stanford University buildings that were supposed to be earthquake proofed, or at least were designed to withstand severe shocks, would have escaped dismantling and demolition if tying rods had been used liberally in their construction. The Palace Hotel, in which there were many cross walls and iron rod reinforcements, suffered comparative little damage, although built of brick faced with stone. The common impression that wooden buildings should not be put up in an earthquake zone because they would be the first to collapse is rejected by Professor Redway, who maintains that if there is a solid foundation and the building is securely fastened to it, not divided into segments at the junction of stories, and the roof timbers are trussed or tied, it will be "almost the ideal for a dwelling" in an earthquake district. Concerning reinforced concrete the earthquake taught no lesson, as the method is very modern, but that the San Francisco architects have great faith in it he judges from the number of concrete buildings now in course of construction.



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Architects of To-day.

MR. HENRY B. HERTS.

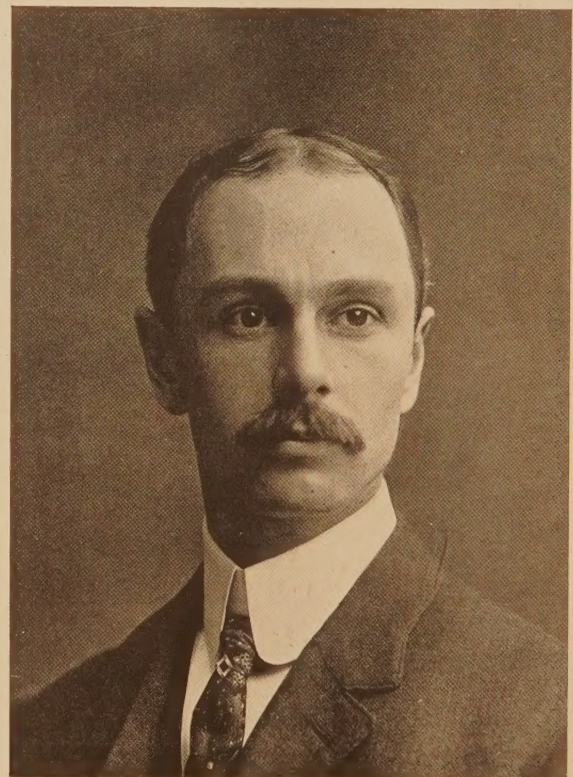
NOW that all professions are going in for specialities," said an architect of our acquaintance, "it has often occurred to me that there is room for one more side line in the law which is not adequately covered. Building operations are responsible for an unusual amount of litigation, but whenever I hear a lawyer argue a case involving the technical side of building matters, I am simply astounded at the crass ignorance usually displayed. On the other hand, the average architect in New York is compelled to have a wide knowledge of the Building Code, the Tenement House Act, the Factory Inspection law, the lien law of various states, as well as municipal ordinances generally, and the legal obligation of the owner, architect and contractor. In addition it has become the custom for the architect to draw contracts and other legal papers connected with his work and it therefore seems to me that a combination between a city architect and a lawyer in the practice of what might be termed architectural jurisprudence would be successful in a field now covered in a very inadequate way."

IN consequence of the general belief that the new Building Code of New York City will provide restrictions against the erection of ultra tall buildings there has been a considerable rush for permits for this type of construction, notwithstanding the general depression in the building trades. The Tower Building at No. 50 Broadway, which was the first building of skeleton construction to be erected in New York has already become antiquated and a permit has been secured for putting up a new skyscraper on this site.

New building No. 275 of 1908 is the designation of the permit for the new Equitable Building, which is to

cost \$10,000,000, and which is to go up in the air as far as the Eifel Tower. This building naturally presented a number of questions to the Bureau of Buildings upon which interesting precedences must have been made, as under a strict interpretation of the law the walls would have to be five feet thick and the stairways so numerous that they would make an economical layout practically impossible. Strange as it may seem the daily papers report that the examination of this immense set of drawings was made by the Engineers of the Bureau in one or two days with the assistance of men from Mr. Burnham's office, a circumstance which reads very strangely to the average architect who waits two or three weeks in order to secure a permit for a structure of the ordinary type. One of the trade papers represents the Equitable Tower as saying to St. Peter, "Pardon me, but do I intrude?"

IT should be some consolation to the advocates of non-restriction that Professor Gustave Eberlin, of Berlin, who recently visited New York has written an appreciation of the fine arts in America in the *Vossische Zeitung*, in which he even finds something to admire in the skyscrapers, although he limits his admiration to their aspect from the river, from which point he believes that they have "a disjointed splendor which all the architectural elegance in other buildings cannot convey." Professor Eberlin notes particularly our bad city planning and states that "a number of buildings beautiful in themselves, pearls of splendid architecture, lose all their charm on account of their unsuitable sites and are scarcely noticeable." The critic, however, considers our architecture generally as pre-eminently classical



Architects of To-day.

MR. HUGH TALLANT.

and states: "that every style of France from the Kings down to the Emperors is represented, the more finished monumental buildings being redolent of this style as well, but although the architects have largely copied our Italian, Spanish and mediæval palaces they have spoiled their efforts by hemming in their creations in narrow, dirty streets."

THE newest State in the Union is coming into line with a licensing bill. The State Association of Architects, in convention at Tulsa, Okla., has decided to champion a bill to be introduced in the next legislature governing the practice of architecture in Oklahoma. One feature of the proposed law is an examination to test the fitness of the applicant. J. J. Walsh, of McAlester, is president, and W. M. Fowler, of Oklahoma City, secretary of the association.

EVERY practitioner knows that the most difficult part of his duties of superintendence always comes at the end of the work, when he has to determine the time when the contract is actually finished and when he must carefully examine the innumerable details, many of which have been largely in the mind of his client to see that the man who pays the bills has just what he expected. The average contractor realizes the difficulty of determining absolutely just when his contract is finished, and he will usually make some alterations or additions even after the final certificate is issued, but a proper appreciation as to when the work is really done will be greatly enhanced by an examination of a book recently issued by Professor George Doan Russell, formerly Professor of Law in the Brooklyn Law School. Professor Russell has been a practicing architect himself and he knows what the profession is "up against," and, although he naturally views the question from a sympathetic standpoint he does not forget the contractors rights in reviewing the law on this most important subject. In the early years of American legal procedure the decisions were of a very stringent character, compelling an almost exact performance on the part of the contractor before he could recover the amount due under his contract. In the State of New York, however, this rule has become less harsh and the author has selected for consideration a number of cases which point the way to a clear perception of the rights and duties of both parties. The following is an opinion from the bench, which indicates the present view of the New York Courts:

"There is no substantial performance when no attempt is made to comply with express requirements in the specifications. A contract is not performed by substituting for that which is required materials, methods or workmanship which in the opinion of the contractor are considered just as good, unless the substitution relates to matters of minor importance and is made in good faith for sufficient reasons, and there is an adequate allowance for the difference. It is not sufficient for the builder to build the house, but he must build the house contracted for. Unless the owner had the right to contract for what he wanted, there was no use making a contract. Any substantial change is at the risk of the contractor, and, in order to avoid injustice, the law tolerates unsubstantial deviations made in good faith."

ONE of our contemporaries recently published a story telling of the difficulties of the home builder who wished to build a country home costing less than \$10,000, and particularly referred to the difficulties obtained in securing an architect for such a building at the fee of five per cent. This is one of the matters which, undoubtedly, will

be cured by the new schedule adopted by the Institute of Architects after it had a sufficient trial, so that our clients will get in the habit of paying a greater fee for this type of work. The revision of this portion of the schedule was bound to come, as every man who has designed small houses at the old fees has had the lesson driven home to him that he cannot do work of such a character at this percentage and make any more than his mere expenses, if he has any conscientious scruples about doing his work properly. It is a fact that if a man gets enough small dwelling house work at five per cent. that he is bound to "go broke."

THE NEW ACADEMY OF MUSIC.

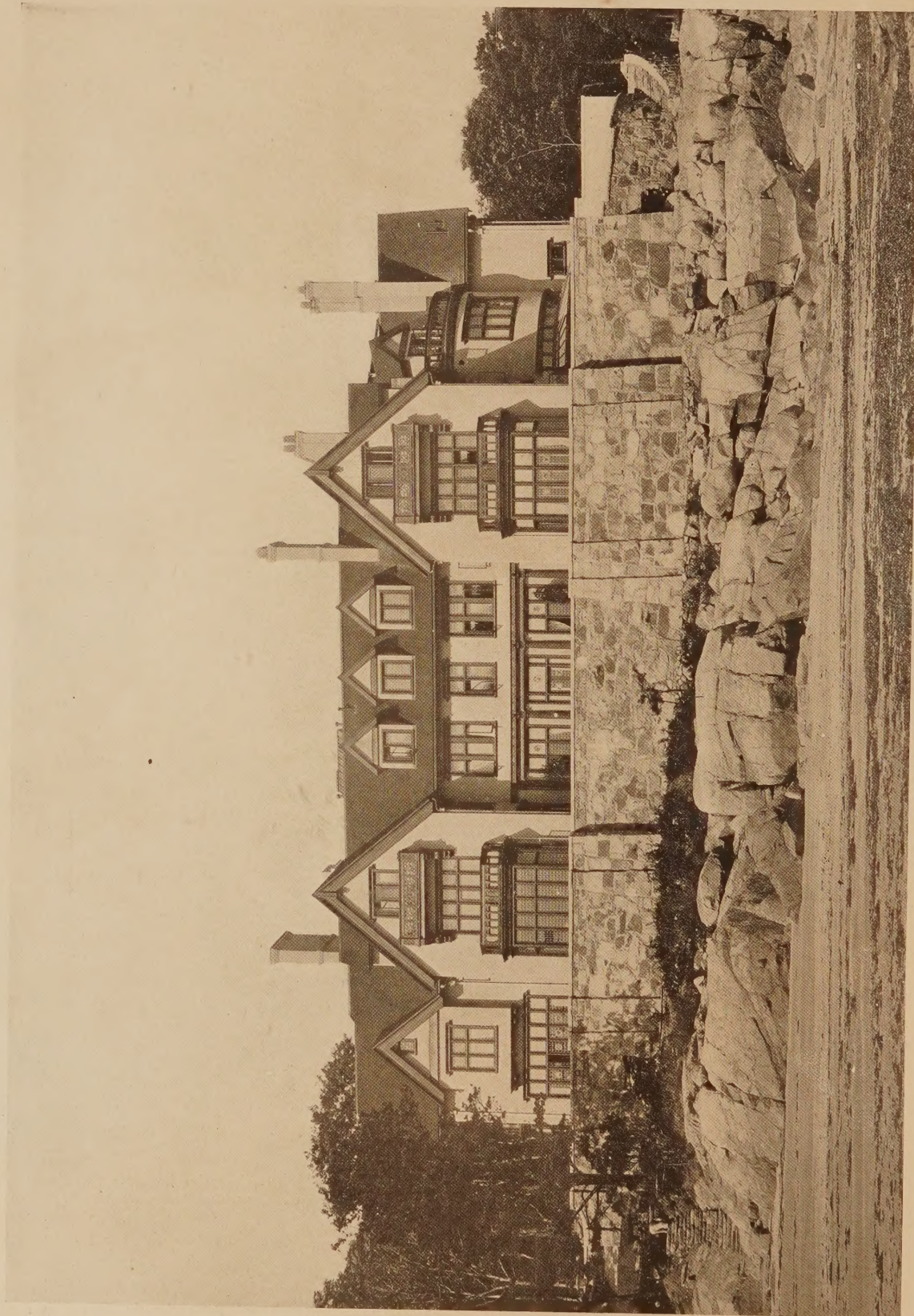
THE old Academy of Music served Brooklyn from its opening in 1859 until it was burned in November, 1903. For great public meetings, for great fairs (like that of the Sanitary Commission for Union Soldiers in 1864), for Grand Opera, for splendid orchestral and vocal concerts, for lectures—indeed for representative public gatherings to promote every good cause where the need was large—the old Academy was all-useful during more than forty years. Without it the career of Brooklyn would have been far less interesting, far less important, far less prosperous. But, when it was destroyed, Brooklyn needed the Academy more than ever; for the consolidation with Manhattan had not alone destroyed its municipal independence, it threatened the very existence of its distinctive civic life. Brooklyn has always been remarkable for its devotion to ideals of education and refinement and for its support of all these influences that make for culture and the up-building of the home. These influences needed a rallying point, an agency of power through which they might be fostered and developed. The old Academy provided this in part; the new Academy will provide it in full, for the new building will be so comprehensive in its features, so varied in its functions, and so attractive in its appearances that no community in the world will possess its like.

Within a few weeks after the destruction of the old Academy, a committee of one hundred was organized to forward the new enterprise, the necessary corporation was formed under its auspices, and after a careful canvass of all available property, the present site was bought and cleared ready for the foundations.

Without question it is the best site in Brooklyn—duly considering every interest and limits prescribed in its choice. It faces on three streets, Lafayette Avenue, Ashland Place, and St. Felix Street, and is within a few minutes' distance of Borough Hall. It is distant only a few hundred feet from many trolley lines, from the elevated railroad, from the subway, from the new principal station of the Long Island railroad. It is convenient, therefore, to every part of the Borough, but although so accessible there is no railroad upon either of its three fronts, and thus, like the old Academy, it will be free from injurious noise while easy and safe for approach.

The competition for the selection of an architect was arranged in accordance with the best principles of modern architectural practice as exemplified by the schedule of the American Institute of Architects. Ten of the architectural firms of highest repute in Brooklyn and Manhattan were invited to compete. Professor Laird, of the Architectural School of the University of Pennsylvania, served as expert

(Continued page 167)



RESIDENCE, CHAS. HEAD, MANCHESTER, MASS.

American Radiators.

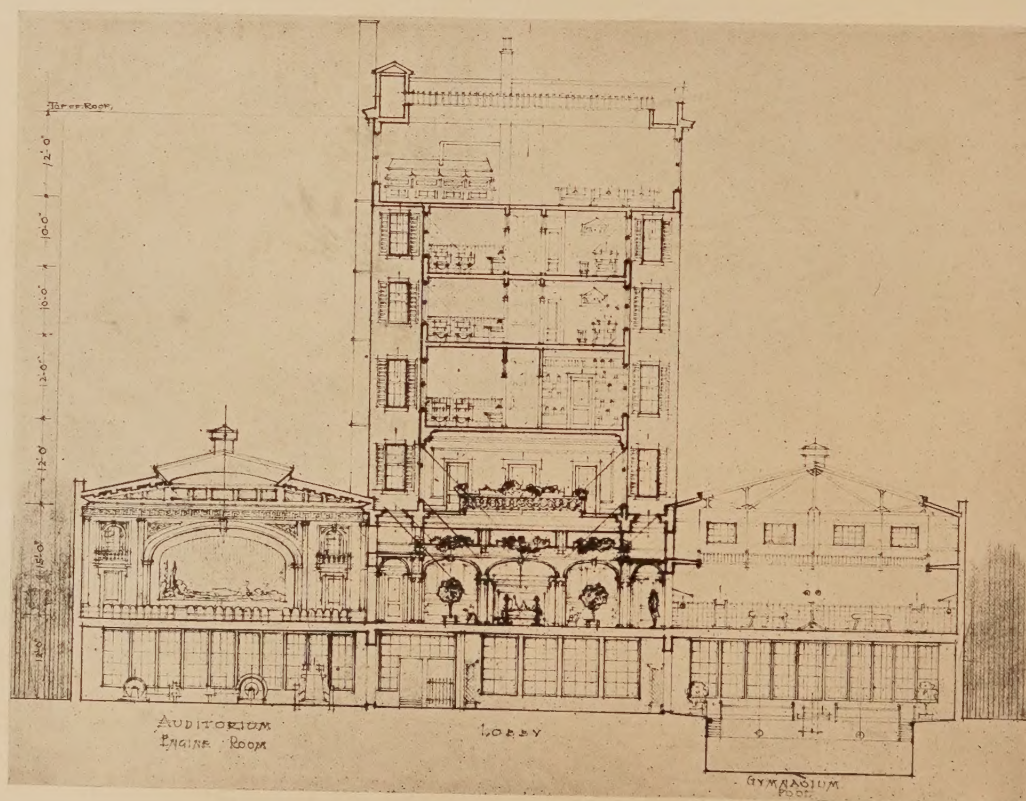
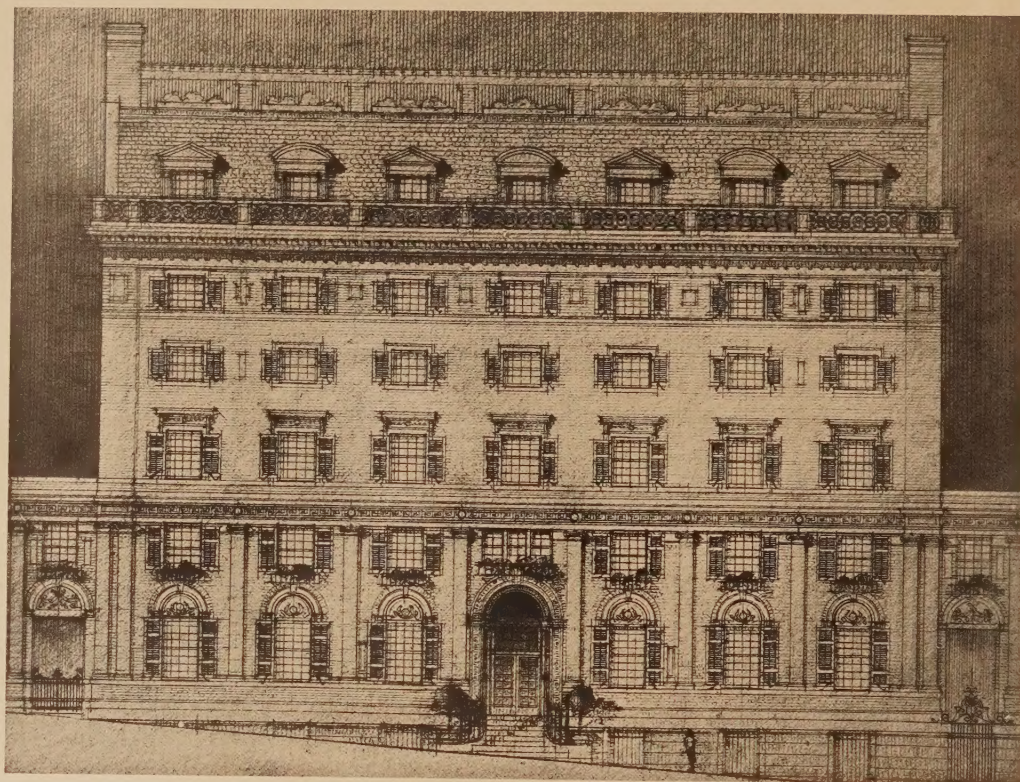
H. D. Hale, Architect.

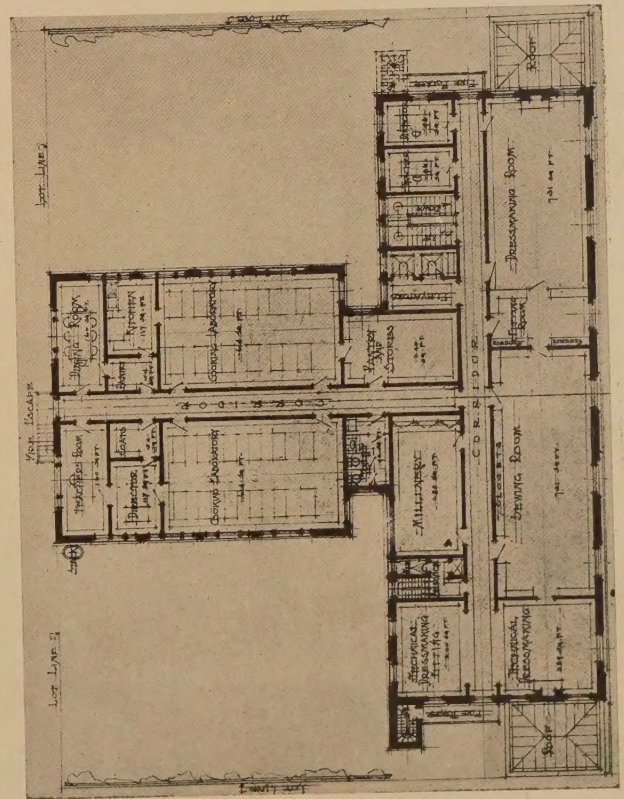
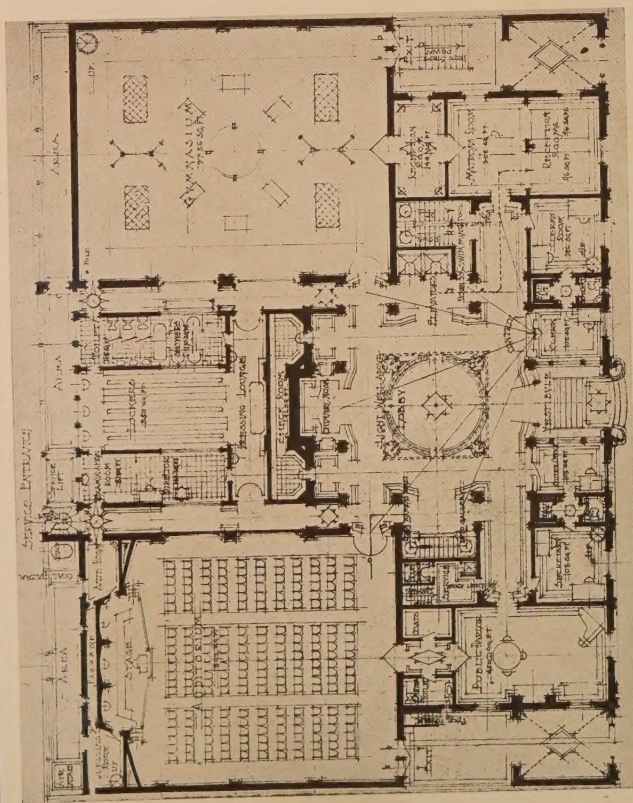
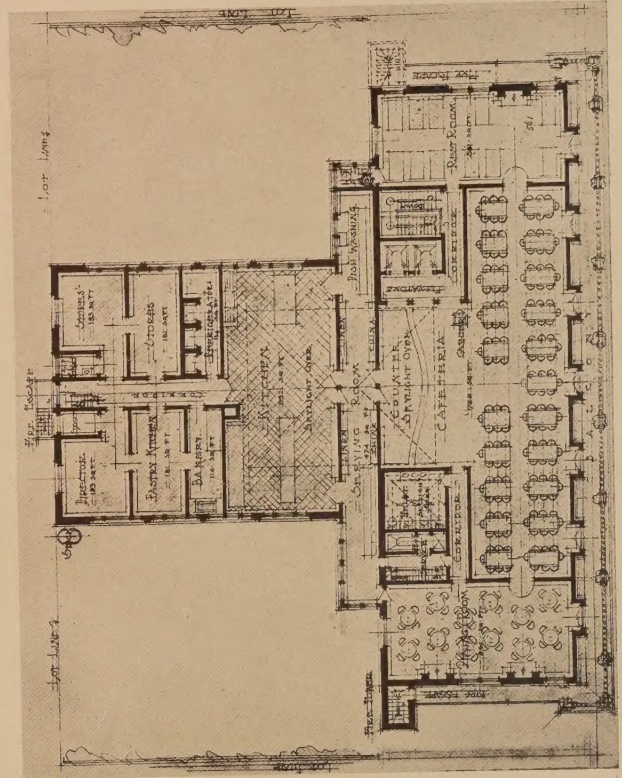
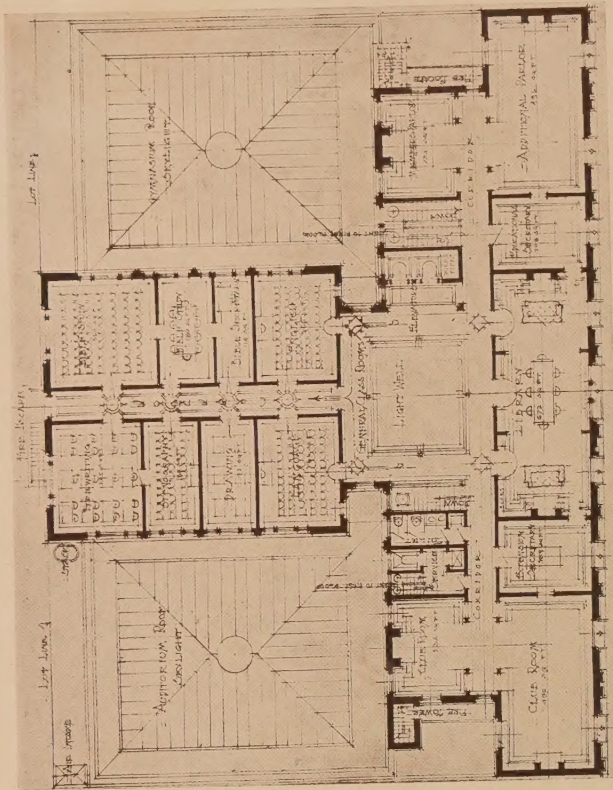


H. D. Hale, Architect.



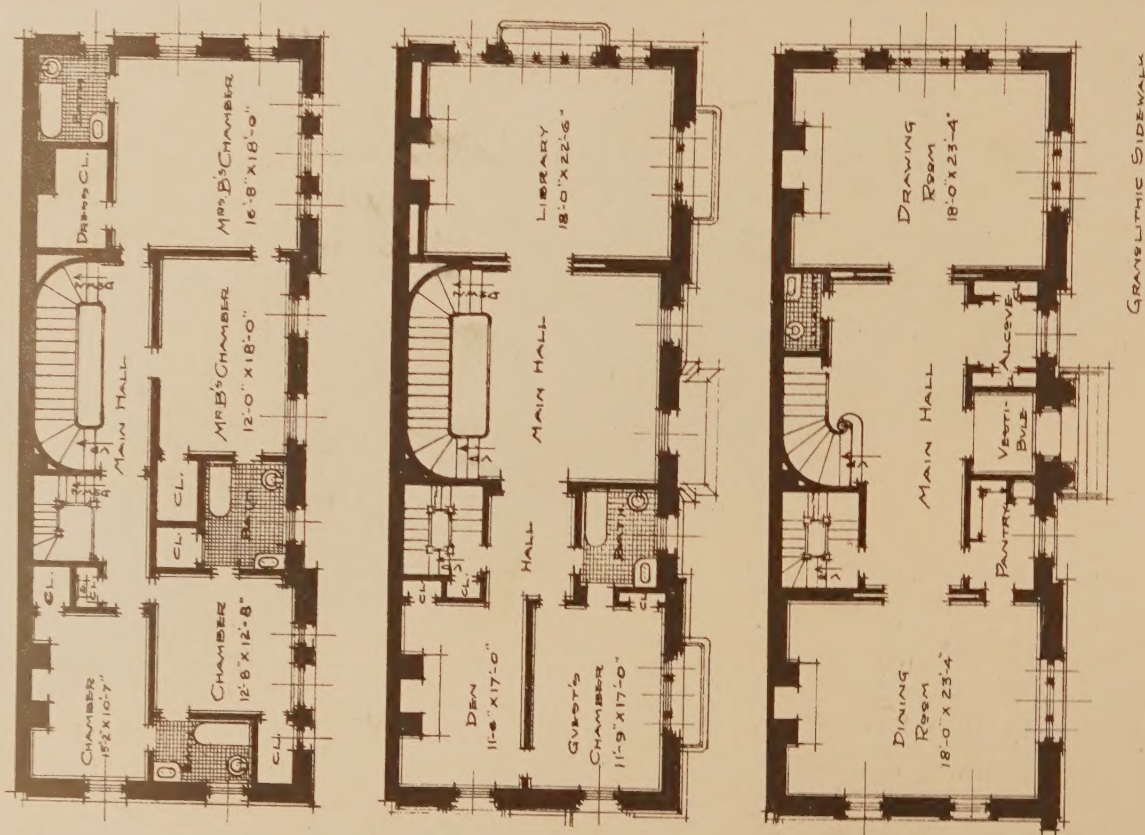
DETAILS, RESIDENCE, CHAS. HEAD, MANCHESTER, MASS.





FIRST, SECOND, THIRD AND SIXTH FLOOR PLANS, PLACED I. Y. W. C. A. BUILDING, PITTSBURGH.

Janssen & Abbott, Architects.



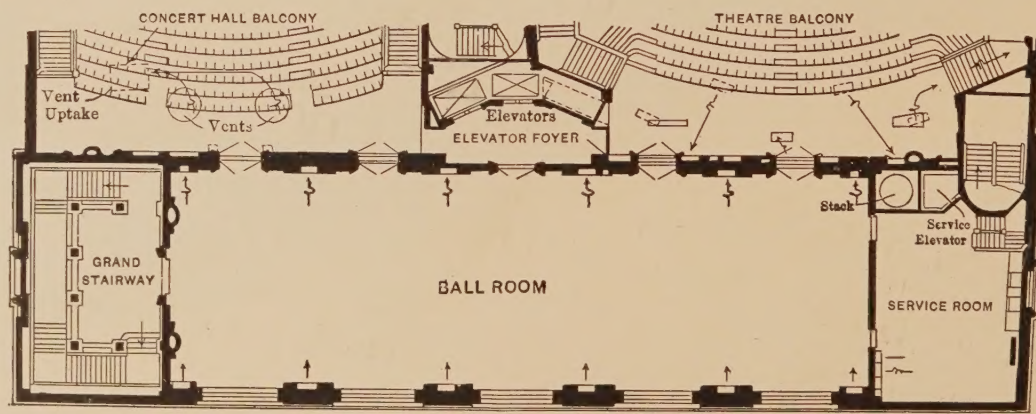
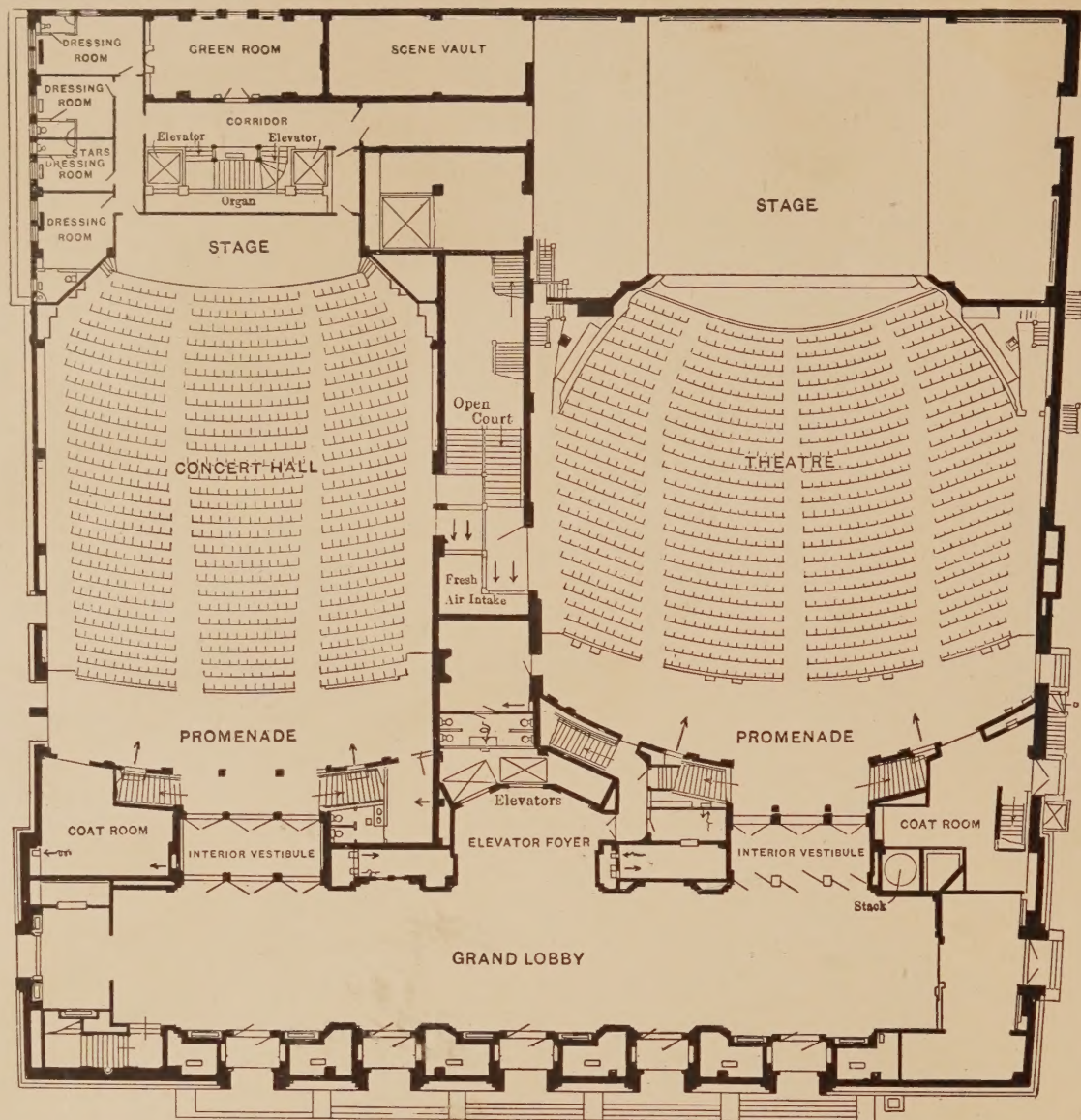
RESIDENCE, JOHN C. BELL, 22d AND LOCUST STS., PHILADELPHIA.

Horace Trumbauer, Architect.



RESIDENCE, DR. E. M. HERRING, ASBURY PARK, N. J.

C. W. Brazer, Architect.



PART PLAN AT BALCONY LEVEL

(Continued from page 159)

adviser in preparing the program of the competition, and Mr. Carrere, of Carrere & Hastings, and Mr. Mead, of McKim, Mead & White, consented to act, together with the adviser, upon the Jury of Award which passed upon the merits of the design.

After a careful study by the committee and Professor Laird of all the principal theatrical buildings in this part of the country, a tentative program was drawn up and submitted for discussion at a meeting to which representatives of all the invited firms of architects were present. As a result the final program for the construction of the building was such a model of completeness and accuracy that a year and a half of subsequent study has not resulted in any essential modifications except where dictated by questions of economy. A number of the designs submitted were of the very highest excellence, and the merits of the successful design—that of Messrs. Herts & Tallant—may be judged by the photograph published in this issue of ARCHITECTURE.

It was seen at the outset that there would be difficulty in obtaining the building required for the sum at the disposition of the Building Committee, and the program specifically provided for the exigency that the estimates based upon the working plans and specifications might exceed the amount available. The arrangement was one satisfactory alike to the committee and to the competing architects. This point is worthy of special mention in contrast with the usual requirements of competition programs whereby the competing architects are required to guarantee the execution of an amount of work impossible within the limits of the appropriation available. In the case of the Academy it was ultimately necessary to reduce the size of the main auditorium from seating capacity of 3,000 to 2,200 and also to remove practically all of the purely architectural treatment of the exterior. With this exception the building just completed is in almost exact accordance with the original competition and designs.

The new Academy of Music, like all great monumental structures, is characterized by extreme simplicity in its general arrangement. This provides for a variety of functions, musical, dramatic, social and educational, so related that they form a single organism whose parts may be kept distinct or operated together.

It consists of four principal divisions: The Opera House, the Concert Hall, the Foyer, and the Institute Rooms. Each of these divisions is, however, designed to serve two or more purposes.

The Opera House is laid out on the lines of the standard American theater, *i. e.*, it consists of a main floor and two balconies seating a total of 2,200. It is distinguished by the absence of the tiers of boxes customary in most Opera House auditoriums. The gentlemen who stand back of this enterprise have reserved to themselves no privileges not open to the general public and there is to be no tier of subscribers' boxes. It is expected that this auditorium will serve not only for grand opera, large theatrical productions, oratorio and symphony, but also for political and educational meetings of every description, and, with this end in view, no pains have been spared in the arrangement of compactness of seating and excellence of sight lines.

The Concert Hall is to consist of a main floor and one balcony seating a total of 1,400. While intended primarily for the execution of chamber music, it will more often be used as the main Lecture Hall of the Institute.

Probably the most distinctive feature of the building is the Foyer. This extends across the Lafayette Avenue front of the building forty feet in height with an area of 5,000 square feet. This Foyer is to be adapted for use as either a ball room or a banquet hall and is therefore provided with retiring room, coat rooms, kitchen, serving rooms and other necessary accessories.

The Institute rooms comprise a Lecture Hall seating over 400, several class rooms, an art studio and all the necessary executive offices.

To give a more definite idea of what all this means, it may be said that while the Brooklyn Academy of Music in point of size is about one-half as large as the Metropolitan Opera House, in point of seating capacity it is about one-third greater. That is to say, while the Metropolitan Opera House seats some 3,300, the various auditoriums and Lecture Hall of the Academy, in one-half the space seat 4,500 without counting the Foyer of which there is no counterpart in the Metropolitan. This comparison is made not necessarily to the disparagement of the Metropolitan which is laid out on different lines and with different objects in view, but in order to show the extreme compactness of the design of the Academy.

The building as thus completed containing as it does the principal educational organizations of the City of Brooklyn represents the first great step in this country towards the establishment of a National Conservatory of Music.

The key-note of the plan is to be found in the absolute elimination of all unnecessary corridor space. This may be particularly noted on the plan of the first balcony. It was evident from the outset that the arrangement of the plan in the shape of the letter "U" with the foyer across the front of the building connecting with both auditoriums would obtain the most desirable results, but the dimensions of the property made it impossible to realize this arrangement if any corridors whatever were inserted between the foyer and the auditoriums.

In the present design the elevators are grouped in the center of the building in such a way that although they are provided with only the minimum of adjacent corridor space they nevertheless give access to the foyer and both auditoriums and at the same time they are balanced at the rear of the Opera House by second balcony staircases so as to give an exactly symmetrical form to the rear portion of this auditorium.

The architectural treatment can best be judged by the illustrations of this article. The design throughout possesses the simple dignity which characterizes the best period of Italian Renaissance. The exterior is constructed of light brick trimmed with colored terra cotta. Much of the detail of this terra cotta, particularly the little medallions around the entrance doorways, possesses a charm hitherto unknown in contemporary work. And it is a satisfaction to feel that work of this character comparable with the best Italian terra cotta although designed with distinct originality can be produced at present in this country. No pains were spared to obtain the most harmonious results in this color work. Not only were careful color studies made by the architects but in addition plaster casts of all the principal decorations were made by the terra cotta company that executed this work, and the architects were enabled to study their color effects from these plaster models in full size. While the finish of the greater portion of this terra cotta



RESIDENCE, F. M. FORBES, NEEDHAM, MASS.

Jas. E. Purdon, Architect.

has already been sand-blasted, in many cases this sand-blasting has not yet been done. It is the intention to study the effect of the weather on the more brilliant tones before applying the sand-blast.

While the exterior of the building shows the effects of rigid economy, the interior is decorated more nearly in accordance with the requirements of such a building. The plaster decoration is sufficient in quantity and of unusual excellence of design and modelling. Special attention may be called to the details of the boxes in which the extremely difficult problem of the differences in level of the adjacent boxes has been very successfully treated.

The decorative panels on either side of the entrance doorways in the ball room are equally attractive and in general the treatment of the figure work and decoration on the interior possesses the same charm and excellence as that of the exterior, although executed by entirely different artists.

It is, however, to be said for the interior of this building, even more than for the exterior, that it must be seen to be appreciated.

The general color scheme, which has been executed under the direct personal supervision of Mr. Wm. De Leftwich Dodge, is perhaps the best example of mural treatment hitherto seen in this country, and this in spite of the fact that at certain points, notably over the proscenium arch in the Opera House and in the ceiling of the ball room, there are still lacking the figure paintings which would serve as a key-note for the entire decoration.

The City of Brooklyn is to be congratulated for the completion of this enterprise, unique in scope and complete-

ness among the educational institutions of the present day, and the public at large owes a deep vote of gratitude to the generosity, patience and perseverance of the men who have made possible this magnificent result.

SOME REASONS FOR FAILURE IN ARCHITECTURE.

EVERYONE is a slave to custom; but it would be difficult indeed to find a greater slave to it than the average architect. As far as the artistic side of his profession is concerned, it is well that an architect should be bound down to tradition; for art, although it should be free, is necessarily progressive. The Greeks, had they been suddenly called upon to solve the problems of design and construction in the grand Periclean age with which the modern architect has to contend, would undoubtedly have failed utterly, through lack of suitable experience, and of examples on which to base their attempts at designing and planning buildings such as we now see in New York and our greater towns. It is impossible to suppose that Calliocrates himself, had it been demanded of him to design an office building, could have produced anything suitable to the requirements. Not only would his planning and general arrangement have been entirely inadequate, but his design would have been as faulty as his plan. Had Michael Angelo, or Barmante, or Sir Christopher Wren been cast upon an island and isolated entirely from the civilization of their times, would these great names have adorned the pages of history, or would our minds be overwhelmed with the sense of regard, akin to reverence, which we experience at the mere sight of them? Under such circumstances,

probably nothing ever would have been heard of them. Explorers and archæologists might have discovered evidence of their skill in fragments of stone rudely sculptured with decorative ornament, or huts built with extraordinary skill; but the educated world never would have experienced the joy of beholding such stately structures as stand to-day as adornments to the cities of Rome, Florence and London. Yet, if so, could it be said that the genius of these men was any less because they had no greater means of expressing their ethereal thoughts than in crude sculpture or skilfully-constructed huts, built, perhaps, of mud and boughs of trees? It is difficult indeed to compare objects of art; but there is no reason whatever to suppose that, considering their lack of opportunity of study and training, the savages of West Africa are possessed of a lesser degree of genius than the designers of the Pallazzo Riccardi, or of St. Paul's Cathedral, or the sculptor of the famous "David" of Florence. It is not, then, the genius which is born with a man that alone makes him a great artist; but it must be combined with the power of seizing opportunities when they present themselves. Thus Ruskin would have conceived the true meaning of genius had he added the inborn faculty to "the infinite capacity for taking pains." It would seem, on the face of it, that the one involves the other; and, indeed, the genius who leaves his footprints in the sands of time necessarily must be possessed of the impulsive force called genius, which overwhelms him with a desire to take infinite pains in learning the technique of his profession, and in the production of his works of art. Yet what reason is there to suppose that many a man of inherent genius blooms unseen simply because the impulsive force is not sufficiently great to

overcome his natural laziness, his lack of opportunity for study, or some other similar circumstance? All those who are familiar with the younger members of the artistic professions of to-day know only too well that the youthful artist, and particularly the architectural novice, has implicit faith in his own genius, whether he modestly conceals the fact or openly professes it; and yet we see around us buildings which are nothing more or less than an outrage to civilization. The reasons for this are many, the first and most evident being that many men who are in no way gifted artistically join the ranks of the architectural profession simply because they have had an opportunity of entering the office of an architect as a junior, and, having learnt something of its technicalities, find it difficult to throw it up for some other means of livelihood for which they are better suited.

A man, too, may enjoy the benefits of a large practice simply on the score of his own personality. His friends may be of such a station of life that many of them become his clients, or recommend him, on the score of his general charm of manner or good-fellowship. Again, many a client is himself often the cause of an unsightly structure. As many of our readers know only too well, there are clients who insist upon all sorts of excesses in the mixture of materials and features of every conceivable kind. There is, for instance, the well-known case of a *nouvelle-riche* lady who insisted upon her mansion being built in the Late Gothic style, in spite of her architect's elaborate explanation that it was entirely unsuitable for the situation of the house. In this case the architect had taxed his powers to the utmost to adapt the style to the requirements of his client and of



THE NORMAN RESIDENCE, BRISTOL, R. I.

Winslow & Bigelow, Architects.



THE WILLIAMS RESIDENCE, NAHANT, MASS.

Parker & Thomas, Architects.

the site, and had adorned the porch with elaborate wall tracery, the very richness of which had appealed with considerable force to his client—so much so that the architect, heedful lest further excesses should be committed, attempting to allay her passion of assisting in the design by informing her that tracery-work was very expensive. Whereupon the lady exclaimed, "Then why ain't it all over the 'ouse?" And all over the house it had to go in spite of the architect's expostulations. In another case an architect was asked to design a country house for a client who insisted upon the use of casement windows glazed in small squares, while the client's wife insisted upon sash windows glazed in large sheets. As neither would give way, the architect was eventually instructed to design each window partly as a casement and partly as a sash. So long as clients of this kind exist, there must necessarily be buildings which at the best can only be described as unsuccessful.

Another frequent cause of failure in architecture is timidity on the part of the architect. Many men possess natural abilities, and take infinite pains, but by slow study become slaves to the methods laid down by their predecessors. Instead of allowing themselves a free hand in design, they bind themselves down to the forms they find in books upon construction, and are afraid to use their own judgment—designing good features, perhaps, and then discarding them because they cannot find a parallel example in text-books. This phase of timidity is experienced by most architects in the early days of their career, and it is unfortunately, conducive to great discouragement, and has no doubt caused many a man to drop out of the architectural world. It is such a man as this who looks upon the buildings he has designed with an intense feeling of remorse, and it requires

a great amount of courage on his part to urge him to persevere in the profession he has chosen, and for which he believes he has a natural instinct.

ECONOMY IN BUILDING.

AMONG the difficulties which architects have to face, the question of cost is by no means the least, nor is it one peculiar to our own age. Probably it has existed in some degree as long as architecture has been practiced as a separate art. It existed in the Gothic age; but the method of dealing with it was one which would scarcely find favor in our own day, although it is still to some extent adopted in the case of ecclesiastical architecture. The old Gothic builders, as we know, curtailed the quantity of their work rather than its quality, and if they could not build the whole straightaway, were content to build in sections. The architect of to-day has to do as much as he can for a given sum, and is often asked to do *more*. He is expected to furnish an approximate estimate, and woe to him if it does not prove something more than approximate when the actual tenders are opened. In recent years, a good deal of attention has been bestowed on cheap building, and simplicity of design has been one of the means advocated to this end. Many simple designs are amply justified by their beauty and suitability alone; but their very simplicity has often been the means of increasing their cost; the reason for this apparent paradox is not far to seek; every bit of detail has been carefully designed for its position and purpose, and, in these days of machinery, has probably entailed much more labor than a more elaborate stock pattern. It is becoming more and more incumbent on the modern architect to study every new method of construction, and every device by which he can

legitimately reduce the cost of building. If he wishes to design his own detail, as he certainly should, he must arrange to have as many repeats as possible, more particularly in his joinery, and to avoid a multitude of small labors and short lengths. Where a sufficient quantity of one pattern is required to warrant the making of special cutters for the moldings the special design can be turned out at little if any extra cost to stock patterns, so that the architect need not entirely sacrifice individuality in order to secure the economy of machine work.

"Efficiency with economy" is the motto of the age, and architects no less than commercial men have to adopt it. They are entrusted with the spending of large sums of money for their clients, and they must see to it that they are spent to the best advantage. At the very first interview with the client, the question of cost usually crops up, and is often very much to the front, and from that time to the issue of the final certificate, financial questions are never wholly absent. They largely control the general conception of the design as embodied in the preliminary sketches; they necessitate restraint when preparing the working drawings; they call for the most intimate knowledge of materials when writing the specification, and the greatest care to keep within proper limits when preparing the details. During the progress of the works, also, many opportunities of effecting little economies present themselves, and should always be seized. True economy in building cannot be effected by the use of rule-of-thumb methods; every detail of construction and each material must be designed and selected for its particular purpose, and with due consideration to the size and class of building for which it is required.

Probably some of the most difficult points to settle will arise during the writing of the specification; too often these documents bear a monotonous similarity to one another, and, in many instances, are even left for the quantity surveyor to write—a practice which, in the best interests of architecture, cannot be too highly condemned. To the young practitioner, especially, his greatest difficulty arises from lack of practical acquaintance with the materials with which he has to deal—a disability which nothing but time and observation can remove.

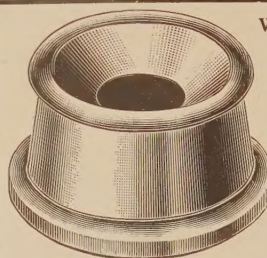
In foundations, the proportion of the ingredients of the concrete should no more be fixed than the nature of the ingredients themselves; but the one should be partly determined by the other, as well as by the strength required. The class of mortar to be used will depend upon the kind of walling, the situation, whether exposed or otherwise, and other circumstances, and the proportions in which it is mixed will not necessarily be 1 to 3, but will vary according to the strength required, and the kind of lime or cement chosen. In the case of sound Portland cement and good angular sand, 1 to 5 makes a thoroughly strong mortar for all ordinary purposes. In plastering, it is by no means necessary to use three-coat work in every room, regardless of the class of building; and so on through all the trades, except, perhaps, the painter. In this trade common colors may be chosen, but it is always false economy to use inferior paint. Possibly the most difficult of all materials to specify is the timber. If the very best is wanted for the highest class of work, there is comparatively little trouble in making the requirements clear; but the greatest difficulty is experienced in getting them complied with.



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It must be obvious that the speculative builder could not sell his houses at the price he does if he built them to the average architect's specification, and although it is not desirable that architects should be concerned in the erection of jerry-built property, it is desirable that property of a similar class should be erected from the designs and under the superintendence of architects, and if this is to be done, it is necessary to recognize that the property must be built at a price to show a reasonable return on the outlay. This class of work opens a perfectly legitimate field for the architect, provided he attains his end by simplicity of treatment, sound construction, and the use of such materials as are capable of fulfilling their purpose for a reasonable length of time.



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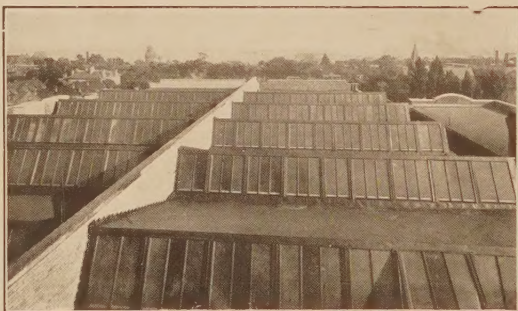
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